IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

APPLIANCE COMPUTING III, INC. d/b/a SUREFIELD, 　　　　Plaintiff, 　　v. REDFIN CORPORATION, 　　　　Defendant.	§ § § § § § § § § §	CASE NO. 6:20-cv-00376

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Appliance Computing III, Inc. d/b/a Surefield ("Surefield") alleges as follows against Defendant Redfin Corporation ("Redfin").

I.   NATURE OF THE ACTION

1.   This action concerns allegations of infringement of United States Patent No. 9,836,885 ("the '885 Patent"), United States Patent No. 10,102,673 ("the '673 Patent"), United States Patent No. 10,510,111 ("the '111 Patent), and United States Patent No. 10,592,973 ("the '973 Patent) under 35 U.S.C. §§ 271 *et seq.*

II.   PARTIES

2.   Plaintiff Surefield is a corporation organized and existing under the laws of the state of Delaware.

3.   Defendant Redfin is a corporation organized and existing under the laws of the state of Delaware, with places of business in this Judicial District, including at 4030 West Braker Lane, Building 5, Suite 510, Austin, Texas 78759. Redfin's registered agent for service of process in Texas is National Registered Agents, Inc., 1990 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

III.   JURISDICTION AND VENUE

4.   This action arises under the Patent Act, 35 U.S.C. §§ 1 *et seq.* This court has jurisdiction over the subject matter of this complaint under 28 U.S.C. §§ 1331 and 1338(a).

5.   Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) and 28 U.S.C. § 1391(b) because Defendant resides here, because Defendant has committed acts of infringement in this judicial district, and because Defendant maintains one or more regularly established places of business in this judicial district.

6.   Redfin has established places of business in this state in Austin, San Antonio, Frisco and Houston.

IV.   FACTS

A.   Redfin's Founding

7.   David Eraker ("Mr. Eraker") founded Redfin in 2002. Mr. Eraker was later joined by co-founders Michael Dougherty and David Selinger. Redfin was started to transform the way real estate was bought and sold by leveraging technology.

8.   Redfin began offering internet search services for real estate in 2004 incorporating mapping elements that were unlike any real estate or mapping services at that time. Under the guidance and direction of Mr. Eraker, Redfin released a new form of interactive online mapping software identifying homes that were for sale.

9.   Starting in 2004 and continuing into 2005, Redfin was the first and only company to combine satellite data, aerial-photography data, multiple-listing data, county-assessor data, sold data, tax-parcel data, and map data into a single, interactive, online interface and presentation.

10.   In July 2006, Redfin was the recipient of the Innovator of the Year award by Inman News, a leading online news source for the real estate industry.

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B.   David Eraker's Intellectual Property Contributions to Redfin

11.   On June 16, 2004, Redfin filed a provisional patent application, U.S. Patent Application Serial No. 60/580,0046, titled "Real Estate Data System and Method" and naming Mr. Eraker as first-named inventor, along with Adam M. Dougherty, Edward Smith, and Stephen Eraker (the "'046 application").

12.   The '046 application discloses a number of ideas, concepts, and technical details related to implementing a system for map-based real estate search that originated with Mr. Eraker.

13.   On February 1, 2005, Redfin filed a provisional patent application, U.S. Patent Application Serial No. 60/649,459, titled "Displaying Content Based on Geographic Queries," and naming Mr. Eraker as first-named inventor, along with Adam M. Dougherty, Edward Smith, David Sellinger, Brad Cerenzia, Sameer Rayachoti, and Queena Yi (the "'459 application").

14.   The '459 application discloses a number of ideas, concepts, and technical details related to implementing a system for map-based real estate search that originated with Mr. Eraker.

15.   While at Redfin, Mr. Eraker developed each of the concepts disclosed generally in the '459 and '046 applications further, working confidentially in coordination with Redfin developers and contractors.

16.   On information and belief, after Mr. Eraker left Redfin, Redfin developers used or relied on Mr. Eraker's confidential development work to reduce his disclosures and concepts to practice and to pursue additional patent coverage on Mr. Eraker's confidential development work.

17.   Both the '046 and the '459 applications serve as the foundation for several issued and pending patent applications assigned to Redfin.

18.   For example, at least the following issued patents assigned to Redfin claim the benefit of filing date of the '046 application:

U.S. App. S/N	Patent No.
11/154,263	9,213,461
11/154,937	9,105,061
12/700,736	8,838,504
13/754,808	9,760,237
13/754,833	9,576,317
15/436,443	10,078,866

19.   Additionally, the following issued patents assigned to Redfin claim the benefit of the filing date of the '459 application:

U.S. App. S/N	Patent No.
11/154,263	9,213,461
11/154,937	9,105,061
12/700,736	8,838,504
12/759,718	9,436,945
13/754,808	9,760,237
13/754,833	9,576,317
15/224,297	9,852,447
15/436.443	10,078,866

20.   David Eraker is named as an inventor on at least the following issued patents assigned to Redfin, each one claiming the benefit of either the '046 application, the '459 application, or both:

U.S. Patent No.	Issue Date
8,838,504	06-16-14
9,105,061	08-11-15
9,213,461	12-15-15
9,436,945	09-06-16
9,576,317	02-21-17
9,760,237	09-12-17
9,852,447	12-26-17
10,078,866	09-18-18

C.   **Surefield's Patented 3D Rendering Technology**

21.   Surefield is an online real estate broker founded by David Eraker in August 2012. In April 2014, the company launched a brokerage service to sell homes using a new type of online home tour.

22.   Surefield was the first company to offer commercial image-based rendering for the creation of online 3D home tours that combined photorealism and spatial navigation amongst other features. The company bundled the ability to create these image-based rendering tours with a brokerage service to market and sell homes in Seattle, Washington and Bellevue, Washington. Surefield went on to leverage these online 3D tours to successfully list homes in the multiple listing service without conforming buyers' agent commissions and continues to offer this service today.

23.   Surefield's 3D tour enabled both spatial navigation and photorealism in the same user interface by leveraging multiple image-based rendering approaches to render panoramas and synthetic viewpoints in different locations as the user translated between different locations of an online model of a home. Using computer vision to extract 3D geometry from images and other sources, Surefield was the first to add these features to multi-room, virtual navigation synchronized with other views of the 3D model, such as top-down floor plan views or other projections such as aerial views of the home. Surefield's first-to-market system utilized spatial data boundaries to add location-based navigation features into the user interface for different floors, rooms, and other spatial delineations involved in home sales.
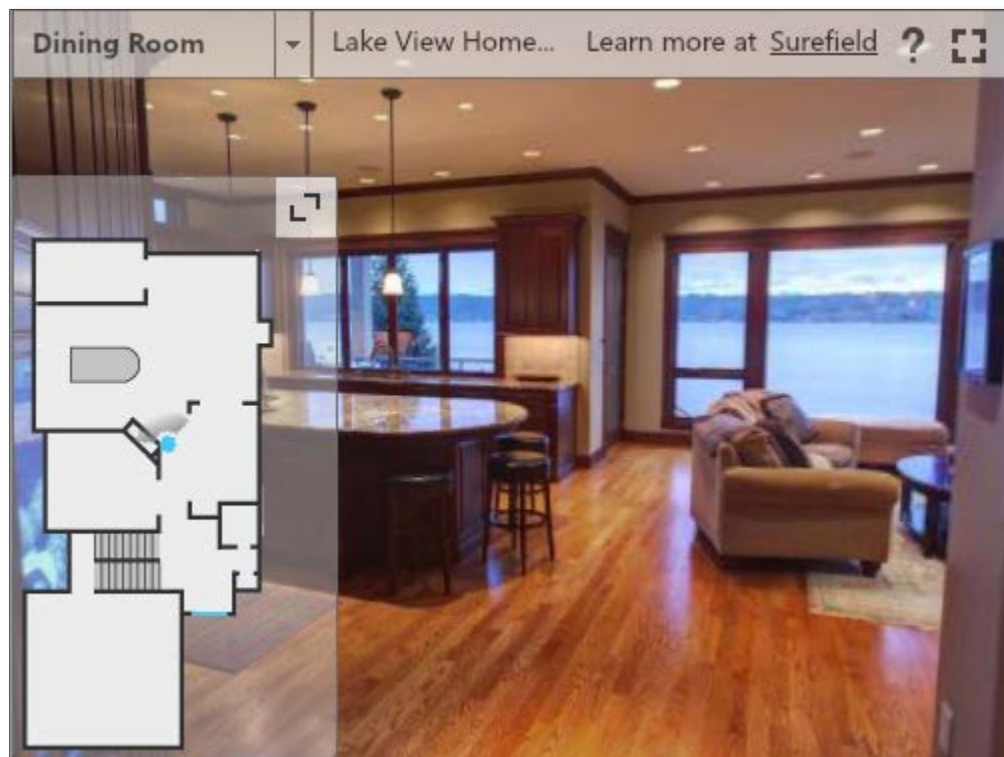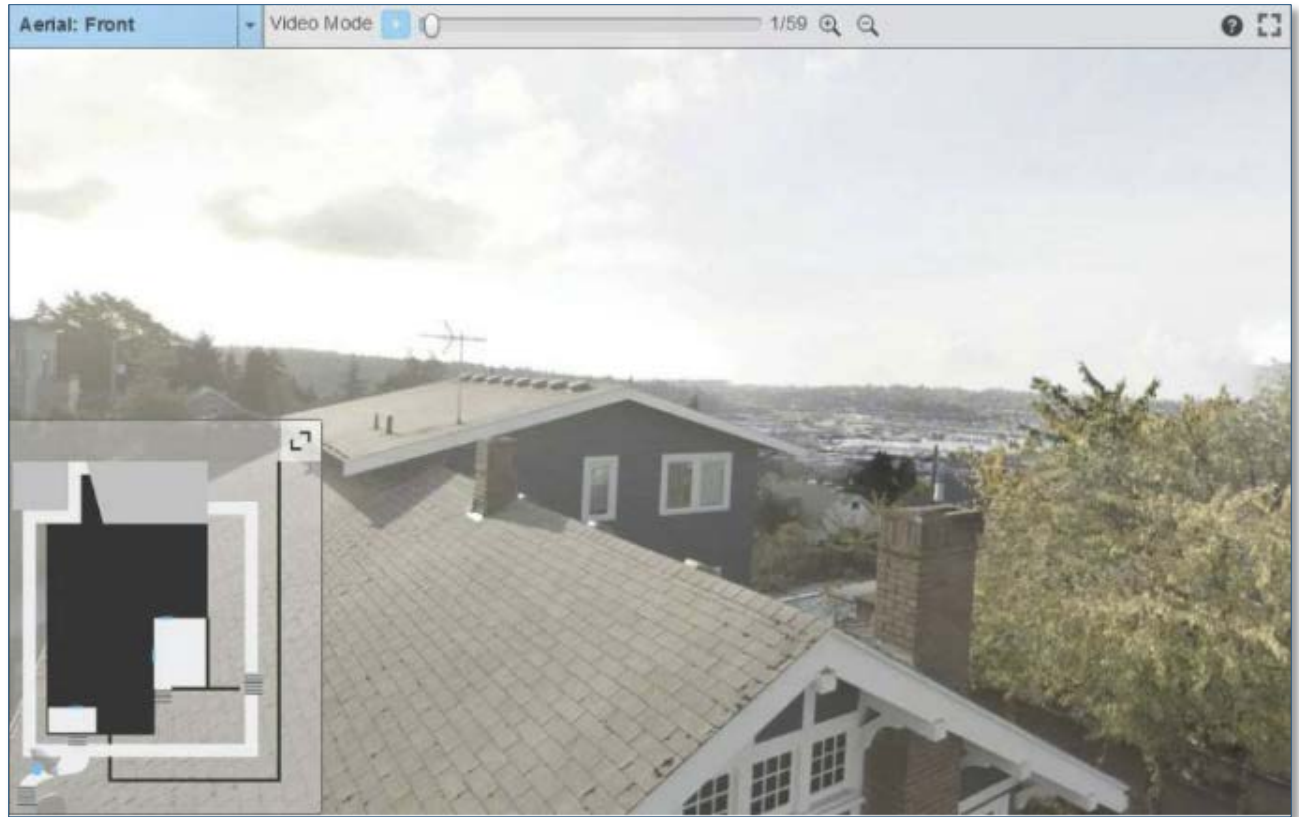
24.   Surefield's website has stated during relevant periods that "Surefield's patent-pending, 3D-home-tour system teleports buyers into your home with a virtual open house, saving you time and money in the process."

25.   Surefield is the owner of all right, title, and interest in and to U.S. Patent No. 9,836,885 ("the '885 Patent"); United States Patent No. 10,102,673 ("the '673 Patent); United States Patent No. 10,510,111 ("the '111 Patent); and U.S. Patent No. 10,592,973 ("the '973 Patent"), including all past, present and future claims for infringement of those patents against defendant Redfin.

26.   Mr. Eraker is named as an inventor on the '885, '673, '111, and '973 Patents (the "Patents-in-Suit").

27.   Each patent is titled "Image-Based Rendering of Real Spaces." The '885 Patent was duly issued on December 5, 2017; the '673 Patent was duly issued on October 16, 2018; the '111 Patent was duly issued on December 17, 2019; and the '973 Patent was duly issued on March 17, 2020.

28.   Each of the Patents-in-Suit shares a common specification. The '973 Patent issued from Continuation Application No. 16/681,287, filed November 12, 2019. The '111 Patent issued from Continuation Application No. 16/130,555, filed on September 13, 2018. The '673 Patent issued from Continuation Application No. 15/832,653, filed on December 5, 2017. The '885 Patent issued from U.S. Application Serial No. 14/525,057, filed on October 27, 2014. All of the patents claim the benefit of the priority date of Provisional Application No. 61/895,978, filed on October 25, 2013.

29.   The shared specification explains that many real estate websites have a description of the real estate listed for sale, including text and pictures, however, for a variety of reasons,

traditional web-based real estate listings "have not eliminated the need to physically go to the property to understand how it is laid out." This is because, according to the '885 Patent, "without physically visiting the property to look at it, the property can only be seen from the viewpoint of the photographer and the lack of spatial navigation."

30.   According to the shared specification, real estate websites of the prior art attempted to solve the problem by creating "video tours" of the home, where an agent or the homeowner would walk through the property, recorded by a video camera. These video tours did not significantly lessen the need for physical property visits because they were recorded from the perspective of the videographer and did not permit a potential buyer to direct her own tour through the property.

31.   According to the shared specification, "in an attempt to allow the viewer to have more control over what he can observe, some real estate websites have used panorama cameras to take panoramic photos of the properties." These panorama photos allowed a viewer to rotate the viewpoint, which was an improvement, but "the location of the viewpoint [was] still restricted to the location at which the panorama photo was taken."

32.   In view of the numerous limitations of current real estate websites, particularly their inability to allow a potential buyer to tour a home without physically visiting the home, the inventions claimed in the Patents-in-Suit provide systems and methods for image-based rendering of 3D geometry capable of delivering a life-like virtual tour of real estate properties.

33.   The '885 Patent includes 18 claims; claims 1 and 10 are independent. claim 1 of the '885 Patent covers "[a] computer system for providing image-based rendering of real property" and it includes several components such as a computer processor, memory, and a user interface.

34.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "obtain two or more photorealistic viewpoints from capture locations in a plurality of spaces of the real property using ground truth image data, the ground truth image data including images of the real property captured from the capture locations."

35.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "combine and process two or more instances of ground truth image data to create a plurality of synthesized viewpoints."

36.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "generate a virtual model of a current space from the plurality of spaces in the real property from the perspective of a current viewpoint, the current viewpoint being one of the plurality of photorealistic viewpoints or one of the plurality of synthesized viewpoints associated with the current space."

37.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "identify the current space in the real property where the current viewpoint is located using metadata associated with the ground truth data."

38.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "visually present the virtual model on a first portion of the user interface, a map overlay on a second portion of the user interface, and a text overlay on a third portion of the user interface, the map overlay indicating a position of the current viewpoint in the current space, the text overlay including a first label identifying the current space in the real property where the current viewpoint is located."

39.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "generate a plurality of spatial boundaries of the plurality of spaces of the real property,

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each of the plurality of spatial boundaries defining a parcel outline of a corresponding space among the plurality of spaces."

40.   According to claim 1 of the '885 Patent, a series of program commands cause the processor to "generate the ground truth image data by annotating the images of the real property with second labels indicating the capture locations using the plurality of spatial boundaries."

41.   According to claim 1 of the '885 Patent, the virtual model, the map overlay, and the text overlay "are functionally linked based on the position of the current viewpoint in the real property."

42.   Claim 1 of the '885 Patent further recites "identifying the current space in the real property where the current viewpoint is located using the metadata associated with the ground truth data includes identifying the first label of the current space using the second labels indicating the capture locations."

43.   The '673 Patent has 19 claims, claims 1, 10, and 13 are independent. Claim 1 of the '673 Patent covers a method relating to image-based rendering of 3D geometry combined with images of real-world scenes.

44.   According to claim 1 of the '673 Patent, the claimed method includes "receiving image data of a plurality of spaces in a property, the image data including a plurality of images captured from a plurality of viewpoints."

45.   According to claim 1 of the '673 Patent, the claimed method includes "creating a plurality of panoramas of the plurality of spaces using the image data."

46.   According to claim 1 of the '673 Patent, the claimed method includes "rendering a virtual model of a selected space among the plurality of spaces using the plurality of panoramas."

47.   According to claim 1 of the '673 Patent, the claimed method includes "causing a device to display the virtual model with a first label indicating a location of the selected space."

48.   According to claim 1 of the '673 Patent, the claimed method includes "defining spatial boundaries of the plurality of spaces in the property using the image data, the plurality of spaces including a plurality of rooms in the property."

49.   According to claim 1 of the '673 Patent, "the image data includes metadata associated with the plurality of images, the metadata indicating capture locations of the images."

50.   According to claim 1 of the '673 Patent, "rendering the virtual model of the selected space includes rendering a 3D scene of the selected space using the plurality of panoramas."

51.   According to claim 1 of the '673 Patent, rendering the 3D scene includes "determining camera geometry using the plurality of images; receiving a selected viewpoint in the selected space; generating a point cloud of the 3D model; determining a geometric proxy for the selected viewpoint using the determined camera geometry and the point cloud; and generating the 3D model using the geometric proxy."

52.   The '111 Patent has 23 claims, claims 1 and 18 are independent. claim 1 of the '111 Patent covers a method relating to image-based rendering of 3D geometry that corresponds to locations within a real estate property.

53.   According to claim 1 of the '111 Patent, the claimed method includes "receiving image data of a plurality of spaces in a real estate property, the image data including a plurality of images captured from a plurality of viewpoints."

54.   According to claim 1 of the '111 Patent, the claimed method includes "creating a plurality of panoramas of the plurality of spaces by processing and/or compositing the image data."

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55.   According to claim 1 of the '111 Patent, the claimed method includes "defining a plurality of spatial boundaries of the plurality of spaces in the real estate property using the image data."

56.   According to claim 1 of the '111 Patent, "rendering a virtual model of the selected space of the one or more spaces delineated by a spatial boundary of the plurality of spatial boundaries that corresponds to the indicate location."

57.   According to claim 1 of the '111 Patent, the claimed method includes "causing a device to display the virtual model with a first label indicating a location of the selected space in the spatial boundary that corresponds to the indicated location."

58.   The '973 Patent has 23 claims, claims 1 and 18 are independent. claim 1 of the '973 Patent covers a method using computer-readable memory medium containing program commands for controlling a computer processor to provide image-based rendering of real property.

59.   According to claim 1 of the '973 Patent, the claimed method includes "obtaining two or more views from capture locations in a plurality of space of the real property using ground truth image data."

60.   According to claim 1 of the '973 Patent, the claimed method includes "defining a plurality of spatial boundaries of the plurality of spaces of the real property."

61.   According to claim 1 of the '973 Patent, the claimed method includes "annotating the ground truth image data by annotating at least some of the captured images of the real property with information indicating a capture location of a corresponding image relative to a corresponding spatial boundary."

62.   According to claim 1 of the '973 Patent, the claimed method includes "combining and processing two of more instances of the ground truth image data to create a plurality of synthesized views."

63.   According to claim 1 of the '973 Patent, the claimed method includes "generating and rendering a virtual model of a current space within the plurality of spaces of the real property from a perspective of a current view."

64.   According to claim 1 of the '973 Patent, the claimed method includes "identifying the current space in the real property where the current view is located using the capture locations indicated by the annotated ground truth image data."

65.   According to claim 1 of the '973 Patent, the claimed method includes visually presenting "at least a portion of the virtual model, a map user interface element, and a text user interface element."

66.   According to claim 1 of the '973 Patent, "the portion of the virtual model, the map user interface element, and the text user interface element are functionally linked based on the position of the current view in the real property."

D.   Redfin's Willful Infringement of the Patents-in-Suit

67.   On or around, August 21, 2014, Redfin released its own image-based, 3D rendering service in coordination and cooperation with another company, Matterport, Inc. (hereinafter "Matterport"). Using the Redfin-Matterport system, potential real estate buyers were able to virtually tour a home in 3D by navigating through a computer's internet-connected user interface. After collaborating with Redfin, Matterport released a 3D model for use by Redfin highly similar in visual presentation or appearance to Surefield's. On information and belief, the visual presentation and underlying technology were copied from Surefield's first-to-market service.

68.   For example, the Redfin-Matterport system employs the same or similar image-based rendering approaches disclosed by Surefield to enable photorealism and spatial navigation by compositing images and rendering panoramas in the user interface itself and by using spatially defined labels, such as navigable text involving different floors, in combination with 3DR. Furthermore, this Redfin-Matterport user interface was not disclosed or used by Matterport or Redfin prior to Surefield and the Redfin-Matterport user interface also includes floor plan views and another 3D aerial projection called "dollhouse."

69.   Not only is the Redfin-Matterport image-based 3D rendering service similar in appearance to Surefield's, but there is evidence that this service utilizes a strikingly similar technical implementation to the one first disclosed and used by Surefield, which is further indicative that it was copied from Surefield's first-to-market service. For example, the Redfin-Matterport system created both hardware and software to generate 3D models in a manner strikingly similar to Surefield's technical implementation. And the Redfin-Matterport system used a plurality of cameras arrayed and configured to capture panoramas in a manner strikingly similar to Surefield's first-to-market service. The Redfin-Matterport system, in a strikingly similar way, extracts 3D geometry from images and uses the combined geometry to process 3D images to render its own image-based results. On information and belief, Redfin directed Matterport to implement features patented by Surefield which Matterport then incorporated into its primary product.

70.   The following images depict Redfin's image-based 3D rendering service and Redfin 3D Walkthrough, which is accused of infringement in this case ("the Accused Products and Services").

9342 Simmons Rd
Austin, TX 78759

Status: Active

$725,000
Price

4
Beds

3.5
Baths

2,592 Sq. Ft.
$280 / Sq. Ft.

Built: 1993   Lot Size: 7,056 Sq. Ft.   On Redfin: 4 days

Favorite   X-Out   Share

Overview   Property Details   Property History   Schools   Tour Insights   Public Facts   Redfin Estimate   Neighborhood   Similar Homes

LISTED BY REDFIN   VIRTUAL TOUR

30 Photos   360°   Street View

Go Tour This Home

MONDAY
11
MAY

TUESDAY
12
MAY

WEDNESDAY
13
MAY

NEW!

Tour in Person   Tour via Video Chat

Schedule Tour

It's free, with no obligation — cancel anytime

Ready to buy?

You can buy this home with or without an agent.
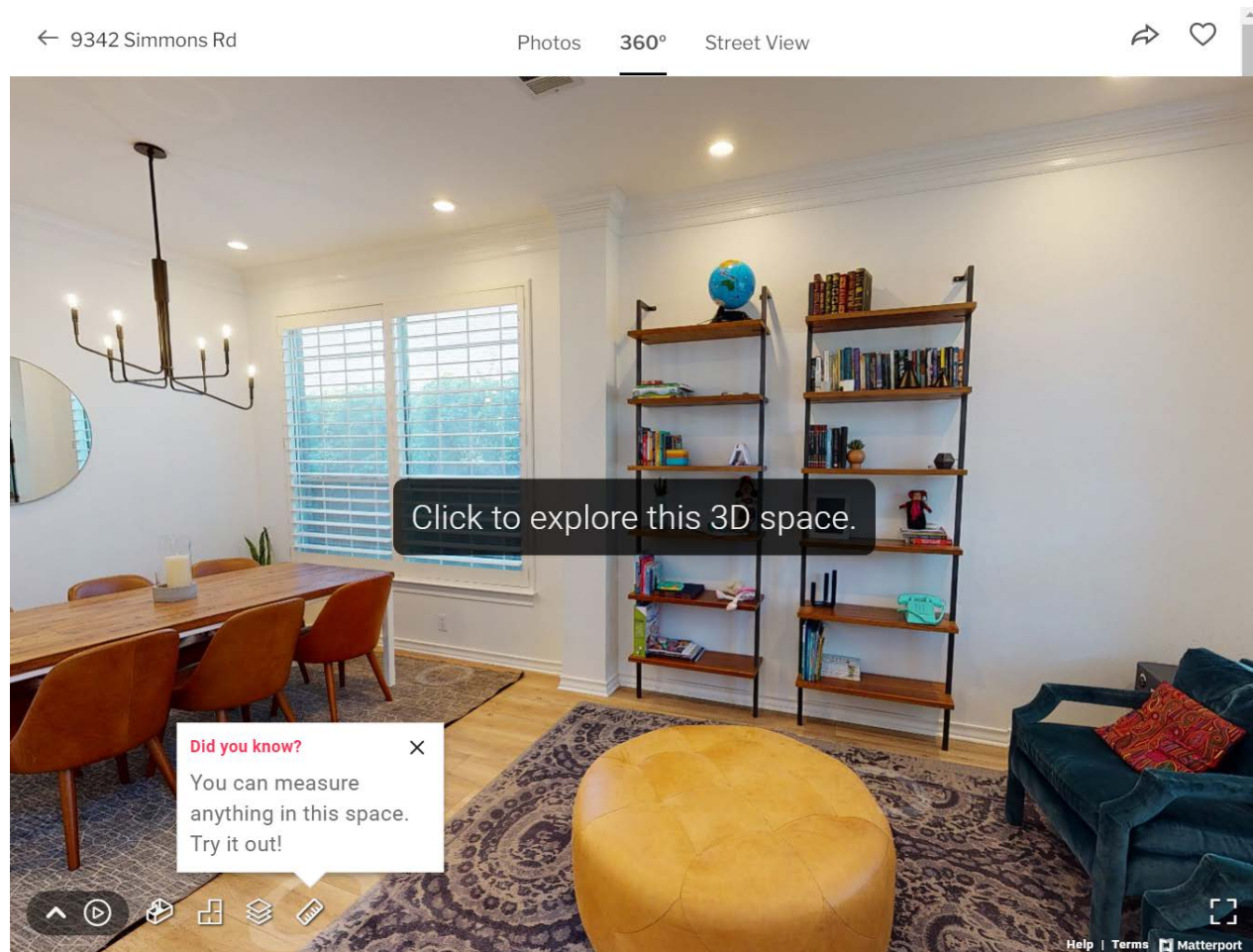
See buying options

Ask a Question | (512) 648-4563

Hot Home

Expected to sell soon. Tour it in person or via video chat before it's gone!

Today: 4:00 pm · 5:00 pm · 6:00 pm · 7:00 pm · More times

https://www.redfin.com/TX/Austin/9342-Simmons-Rd-78759/home/31311909.
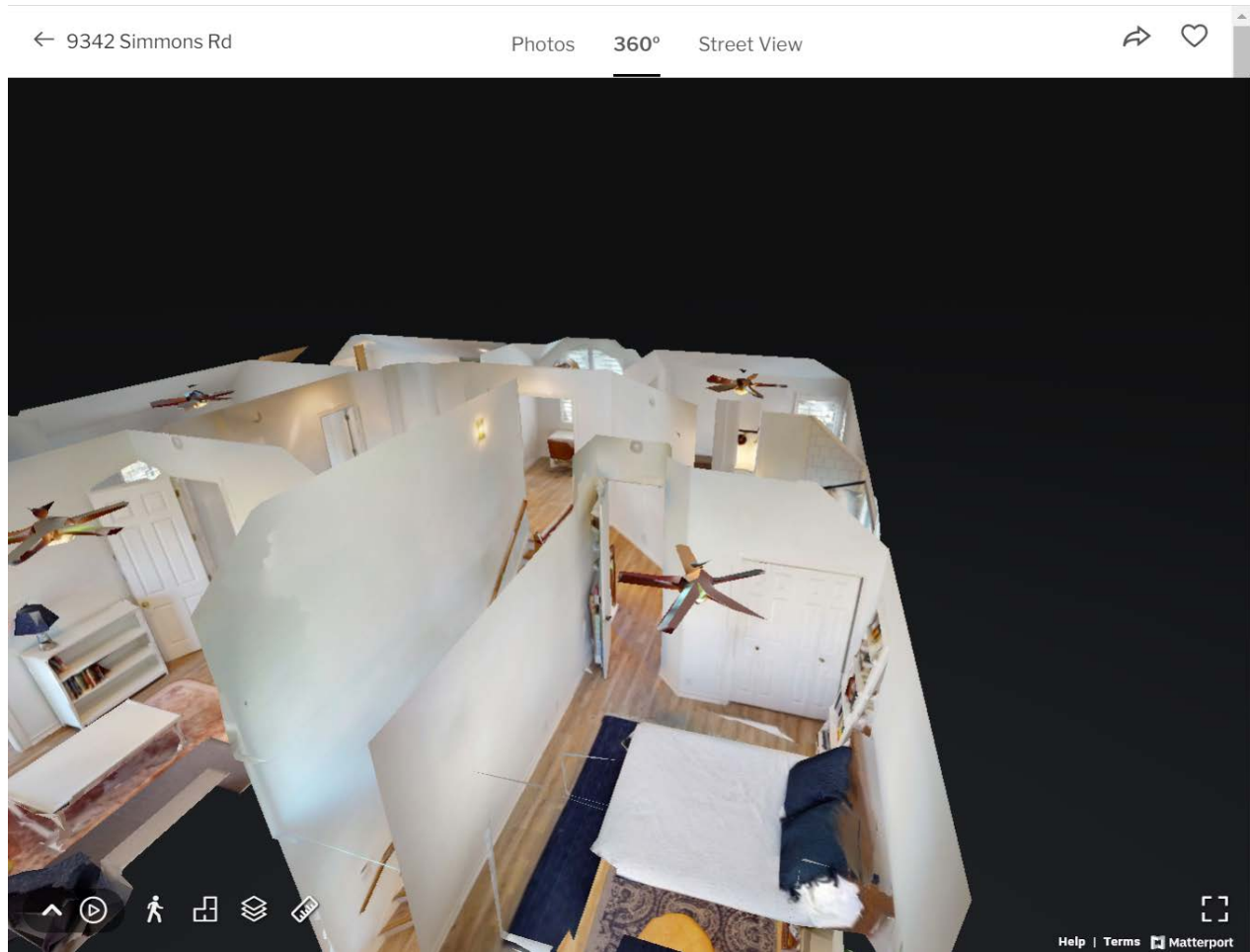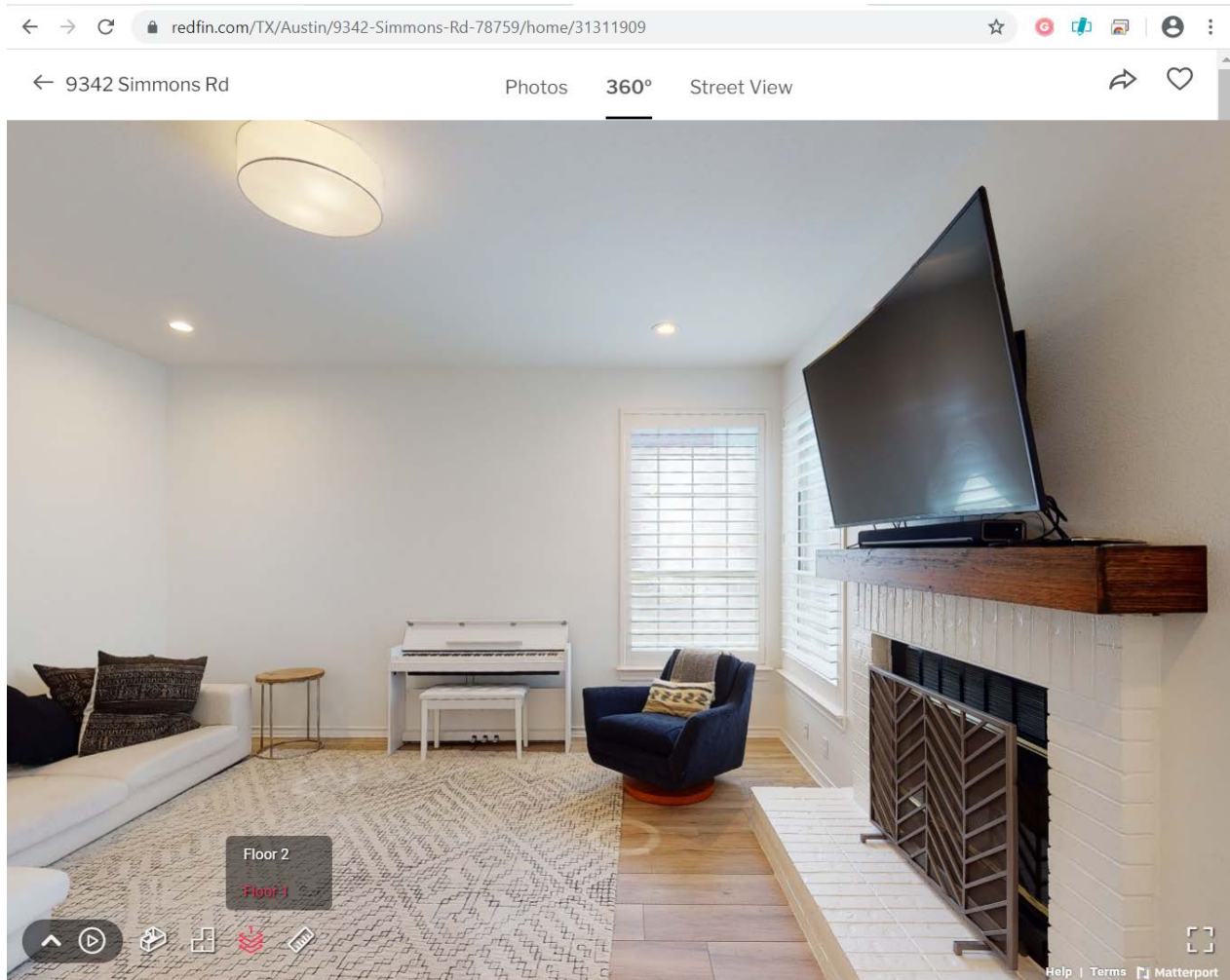
71.   Mr. Eraker notified Redfin of the pending patent applications that issued as the

Patents-in-Suit at least as early as September 2014. Mr. Eraker notified Redfin of the '885 Patent

and Redfin's infringement of it at least as early as January 2018, shortly after the '885 Patent issued.

On information and belief, Redfin became aware of the '673 Patent by May 2019, and upon

information and belief became aware of the '673 Patent and the other Patents-in-Suit at or shortly

following their issuance.

72.   Despite knowing about the Patents-in-Suit, Redfin continues to offer the Accused

Products and Services.

V.   CAUSES OF ACTION
Cause of Action No. 1: Infringement of the '885 Patent by Redfin

73.   Plaintiff incorporates and re-alleges the allegations contained in the preceding paragraphs.

74.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently directly infringing at least claim 1 of the '885 Patent, including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '885 Patent. Defendant Redfin is thus liable for direct infringement of the '885 Patent pursuant to 35 U.S.C. § 271(a).

75.   Exemplary infringing products include Redfin's image-based 3D rendering service and 3D Walkthrough.

76.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '885 Patent, including actively inducing infringement of the '885 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Redfin knows or should know infringe one or more claims of the '885 Patent. Redfin instructs its customers to make and use the patented inventions of the '885 Patent by operating and interacting with Redfin's website in accordance with Redfin's specifications, instructions and terms of use. Redfin specifically intends its customers to infringe by causing their local device to display the rendered 3D images and 3D walkthrough, whereby ground truth image data is used at multiple capture points, the system generates a virtual model of a current space from the plurality of spaces in the real property from the perspective of a current viewpoint, visually presents the virtual model on a first portion of the user interface, a map

overlay on a second portion of the user interface, and a text overlay on a third portion of the user interface, wherein the virtual model, the map overlay, and the text overlay are functionally linked based on the position of the current viewpoint in the real property.

77.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '885 Patent, including contributory infringement of the '885 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. Redfin knows that the infringing products (i) constitute a material part of the inventions claimed in the '885 Patent; (ii) are especially made or adapted to infringe the '885 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in its switches to implement, in the manner claimed, rendered 3D images and 3D walkthroughs for real estate properties, whereby ground truth image data is used at multiple capture points, the system generates a virtual model of a current space from the plurality of spaces in the real property from the perspective of a current viewpoint, visually presents the virtual model on a first portion of the user interface, a map overlay on a second portion of the user interface, and a text overlay on a third portion of the user interface, wherein the virtual model, the map overlay, and the text overlay are functionally linked based on the position of the current viewpoint in the real property.

78.   As a result of Redfin's infringement of the '885 Patent, Plaintiff has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

CAUSE OF ACTION NO. 2: Infringement of the '673 Patent by Redfin

79.   Plaintiff incorporates and re-alleges the allegations contained in the preceding paragraphs.

80.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently directly infringing at least claim 1 of the '673 Patent, including through making, using (including for testing purposes), selling and offering for sale methods and articles infringing one or more claims of the '673 Patent. Defendant Redfin is thus liable for direct infringement of the '673 Patent pursuant to 35 U.S.C. § 271(a).

81.   Exemplary infringing products include Redfin's image-based 3D rendering service and 3D Walkthrough.

82.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '673 Patent, including actively inducing infringement of the '673 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Redfin knows or should know infringe one or more claims of the '673 Patent. Redfin instructs its customers to make and use the patented inventions of the '673 Patent by operating and interacting with Redfin's website in accordance with Redfin's specifications, instructions and terms of use. Redfin specifically intends its customers to infringe by causing their local device to display the rendered 3D images and 3D walkthrough, whereby the system generates a virtual model of a current space from the plurality of spaces in the real property from the perspective of a current viewpoint, wherein rendering the virtual model of the selected space includes rendering a 3D scene of the selected space using panoramas, and rendering a 3D scene based on a selected viewpoint, a point cloud and determined camera geometry.

83.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '673 Patent, including contributory infringement of the '673 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the infringing products. Redfin knows that the infringing products (i) constitute a material part of the inventions claimed in the '673 Patent; (ii) are especially made or adapted to infringe the '673 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in its switches to implement, in the manner claimed, rendered 3D images and 3D walkthroughs for real estate properties whereby the system generates a virtual model of a current space from the plurality of spaces in the real property from the perspective of a current viewpoint, wherein rendering the virtual model of the selected space includes rendering a 3D scene of the selected space using panoramas, and rendering a 3D scene based on a selected viewpoint, a point cloud and determined camera geometry.

84.   As a result of Redfin's infringement of the '673 Patent, Plaintiff has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

CAUSE OF ACTION No. 3: Infringement of the '111 Patent by Redfin

85.   Plaintiff incorporates and re-alleges the allegations contained in the preceding paragraphs.

86.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently directly infringing at least claim 1 of the '111 Patent, including through making, using (including for testing purposes), selling and offering for sale methods and

articles infringing one or more claims of the '111 Patent. Defendant Redfin is thus liable for direct infringement of the '111 Patent pursuant to 35 U.S.C. § 271(a).

87.   Exemplary infringing products include Redfin's image-based 3D rendering service and 3D Walkthrough.

88.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '111 Patent, including actively inducing infringement of the '111 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Redfin knows or should know infringe one or more claims of the '111 Patent. Redfin instructs its suppliers and customers to make and use the patented inventions of the '111 Patent generating and using Redfin's 3D Walkthrough in accordance with Redfin's specifications, instructions and terms of use. Redfin specifically intends its suppliers and customers to infringe by practicing the patented methods using Redfin's 3D walkthrough, including image data associated with a plurality of spaces that are captured from different viewpoints, creating panoramas by processing or compositing the image data, defining boundaries using the image data, receiving a user indication of a location, rendering a virtual model, and causing a device to display the model.

89.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '111 Patent, including contributory infringement of the '111 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the Accused Products and Services. Redfin knows that the Accused Products and Services: (i) constitute a material or apparatus for use in practicing a patented process, constituting

a material part of the inventions of the '111 Patent; (ii) are especially made or adapted to infringe

the '111 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing

use; and (iv) are components used for or in the manner claimed, to generate rendered 3D images

and 3D walkthroughs for real estate properties, including image data associated with a plurality of

spaces that are captured from different viewpoints, creating panoramas by processing or

compositing the image data, defining boundaries using the image data, receiving a user indication

of a location, rendering a virtual model, and causing a device to display the model.

90.   As a result of Redfin's infringement of the '111 Patent, Plaintiff has suffered

monetary damages, and is entitled to an award of damages adequate to compensate it for such

infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

CAUSE OF ACTION No. 4: Infringement of the '973 Patent by Redfin

91.   Plaintiff incorporates and re-alleges the allegations contained in the preceding

paragraphs.

92.   On information and belief, Defendant Redfin, without authorization or license from

Plaintiff, has been and is presently directly infringing at least claim 1 of the '973 Patent, including

through making, using (including for testing purposes), selling and offering for sale methods and

articles infringing one or more claims of the '973 Patent. Defendant Redfin is thus liable for direct

infringement of the '973 Patent pursuant to 35 U.S.C. § 271(a).

93.   Exemplary infringing products include Redfin's image-based 3D rendering service

and 3D Walkthrough.

94.   On information and belief, Defendant Redfin, without authorization or license from

Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '973 Patent, including

actively inducing infringement of the '973 Patent under 35 U.S.C. § 271(b). Such inducements

include without limitation, with specific intent to encourage the infringement, knowingly inducing consumers to use infringing articles and methods that Redfin knows or should know infringe one or more claims of the '973 Patent. Redfin instructs its customers to make and use the patented inventions of the '973 Patent by operating Redfin's website in accordance with Redfin's specifications, instructions and terms of use. Redfin specifically intends its customers to infringe by supplying or generating computer readable media causing their local device to display the rendered 3D images and 3D walkthrough, including two or more views from capture locations using ground truth image data, incorporating a plurality of spatial boundaries within the model of the real property, annotating the ground truth data, combining and processing image data to create synthesized views, and visually presenting a portion of the model on a user interface.

95.   On information and belief, Defendant Redfin, without authorization or license from Plaintiff, has been and is presently indirectly infringing at least claim 1 of the '973 Patent, including contributory infringement of the '973 Patent under 35 U.S.C. § 271(c) and/or § 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the Accused Products and Services. Redfin knows that the Accused Products and Services: (i) constitute a material or apparatus for use in practicing a patented process, constituting a material part of the inventions of the '111 Patent; (ii) are especially made or adapted to infringe the '111 Patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in the manner claimed, to generate rendered 3D images and 3D walkthroughs for real estate properties, including two or more views from capture locations using ground truth image data, incorporating a plurality of spatial boundaries within the model of the real property, annotating the ground truth data, combining and processing image data to create synthesized views, and visually presenting a portion of the model on a user interface.

96.   As a result of Redfin's infringement of the '973 Patent, Plaintiff has suffered monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

VI.   JURY DEMAND

97.   Plaintiff demand a trial by jury of all claims so triable.

VII.   PRAYER FOR RELIEF

WHEREFORE, Plaintiff pray for relief against Defendant as follows:

A.   That the Court determine that one or more claims of the Patents-in-Suit is infringed by Defendant Redfin, either literally or under the doctrine of equivalents;

B.   That the Court award damages adequate to compensate Plaintiff for the patent infringement that has occurred, including lost profits and/or a reasonable royalty at its election, together with prejudgment and post-judgment interest and costs, and an ongoing royalty for continued infringement;

C.   A permanent injunction against Redfin, stopping any further use, sale, or offers for sale of any service that infringes the '885 Patent including the Accused Products and Services and any colorable imitations of the Accused Products and Services;

D.   A permanent injunction against Redfin, stopping any further use, sale, or offers for sale of any service that infringes the '673 Patent including the Accused Products and Services and any colorable imitations of the Accused Products and Services;

E.   A permanent injunction against Redfin, stopping any further use, sale, or offers for sale of any service that infringes the '111 Patent, including the Accused Products

and Services and any colorable imitations of the Accused Products and Services;

F.   A permanent injunction against Redfin, stopping any further use, sale, or offers for
        sale of any service that infringes the '973 Patent, including the Accused Products
        and Services and any colorable imitations of the Accused Products and Services;

G.   An order by the Court increasing any damages for patent infringement up to three
        times the amount found or assessed pursuant to 35 U.S.C. § 284;

H.   A finding that Redfin's infringement was and is willful;

I.   A finding that this is an exceptional case pursuant to 35 U.S.C. § 285 and Surefield
        is a prevailing party and therefore entitled to an award of reasonable attorney fees
        and full costs; and

J.   Such other and further relief as the Court deems just and proper.

Dated: May 11, 2020   Respectfully submitted,

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